



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|--|---------------------|------------------|
| 10/783,165 | 02/19/2004 | Laurentis Cornelis Josephus Hesselmans | 30394-1118 | 7169 |
| 5179 | 7590 | 04/05/2006 | EXAMINER | |
| PEACOCK MYERS, P.C. 201 THIRD STREET, N.W. SUITE 1340 ALBUQUERQUE, NM 87102 | | | MUSSER, BARBARA J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1733 | |
| DATE MAILED: 04/05/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,165

Applicant(s)

HESSELMANS ET AL.

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/19/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-19, drawn to a method of preparing a material, classified in class 156, subclass 219.
 - II. Claim 20, drawn to a cured product, classified in class 428, subclass 174.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a different process such as reacting the first reactive system at room temperatures.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Jeff Myers on 12/7/06 a provisional election was made with traverse to prosecute the invention of group I, claims 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claim 20 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Objections

6. Claim 12 is objected to because of the following informalities: in line 4 the word "polyhudrazide appears". This is a misspelling of --polyhydrazide--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 5-8, 11-13, and 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, it is unclear how the second reactive system can contain the isocyanate of the first reactive system and yet not react at the same conditions as the first reactive system. It is unclear which reactive system is intended to contain what.

Claim 8 recites the limitation "the dispersion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 11, it is unclear if the substrate of lines 4-5 is the substrate of claim 1 or not, particularly since the substrate of claim 1 is not described as impregnated.

Claim 11 recites the limitation "the formed intermediate material" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 12, it is unclear what the relationship of the compounds listed are to the compounds claimed in claim 2 since the specification indicates that one set is part of one reactive system and the other set is part of the other reactive system but claims 1 and 2 do not disclose compounds making up the second reactive system.

Regarding claim 13, it is unclear what the relationship of the compounds listed are to the compounds claimed in claim 2 since the specification indicates that isocyanate is part of one reactive system and the set listed is part of the other reactive system but claims 1 and 2 do not disclose compounds making up the second reactive system.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 5, 10, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Joseph et al.(U.S. Patent 5,959,775).

Joseph et al. discloses a mixture containing two reactive systems which is coated onto a substrate. The polyurethane resin is then reacted under elevated temperatures to form a solid which can be embossed. The re-shaped material is then cured by exposure to radiation, reacting the second reactive system.(Col. 10, ll. 27-45) Since the second system reacts under radiation, one in the art would understand that it would not be reacted when radiation is not present, i.e. when the first reactive system is reacted particularly since it is intended to not react until after the embossing.

Regarding claim 2, the reference indicates that the mixture can contain a mixture of isocyanate and polyol(Col. 10, ll. 28-30) which reacts at elevated temperature, indicating that it would not react at room temperature.(Col. 10, ll. 39-39)

Regarding claim 5, the second reactive system is an acrylate, which is an unsaturated compound that undergoes addition polymerization.(Abstract)

Regarding claim 10, Joseph et al. discloses the elevated temperature at which the first reaction occurs is 70-120C.(Col. 10, ll. 38)

Regarding claim 14, the di-isocyanate of Joseph et al. is considered a polyisocyanate as it contains more than one isocyanate group.(Col. 10, ll. 28-30)

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 11, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph et al. as applied to claim 2 above.

Joseph et al. discloses embossing the coating after the first reaction, and then curing the coating via radiation.(Col. 10, ll. 20-25) The reference also discloses the first reaction occurs at 70-120 C but does not disclose how long the curing takes.(Col. 10, ll. 38) However, the reference does disclose that the curing occurs in an oven through which the substrate moves at a rate of 1.83 m/min.(Col. 12, ll. 3-4) It would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the first reaction in less than 10 minutes since otherwise the oven would be more than 18 meters long, which is unwieldy.

Regarding claim 17, the re-molding can occur at a temperature of 149 C, which is 29-79 degrees above the temperature of the first reaction.(Col. 12, ll. 12)

13. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joseph et al. as applied to claim 1 above, and further in view of Hesselmans et al.(WO 01/23451).

The references cited above do not disclose the compound containing the reactive hydrogen being a polyhydrazide. Hesselmans et al. discloses a coating containing an isocyanate and a polyhydrazide which has a longer pot life than a mixture of an isocyanate and a polyol.(Pg. 1, ll. 8-14; Pg. 4, ll.6-15, 30-34) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the mixture of isocyanate and a polyol of Joseph et al. with a mixture of isocyanate and a polyhydrazide since this would result in a longer pot life for the mixture.(Pg. 1, ll. 8-14)

Regarding claim 4, Hesselmans et al. discloses the polyhydrazide is a powder which is dispersed in a second material which is non-reactive toward the polyhydrazide.(Pg. 3, ll. 25, 29-30)

Allowable Subject Matter

14. Claims 9 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or fairly suggest the isocyanate having an acid group in addition to the isocyanate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BJM


SAM CHUAN YAO
PRIMARY EXAMINER